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AUTHOR Willis, John A.
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ABSTRACT

A survey of teachers in West Virginia county school systems which cooperate with a public television station in the scheduling and broadcasting of instructional television (ITV) addressed three questions: (1) What is the magnitude of ITV implementation and utilization? (2) How is ITV used by elementary teachers? (3) What problems are there in using ITV in elementary schools? Description and discussion of the population surveyed and the questionnaire used are followed by a report on the survey findings, including implementation and hardware issues; utilization levels in grades and classroom settings, classtime used for ITV, and programs watched; teachers' reasons for not using ITV and their suggestions for improving ITV use; and conclusions and implications of the findings for extending ITV use in West Virginia.
(Author/CHV)

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THE USE OF INSTRUCTIONAL TELEVISION IN WEST VIRGINIA ELEMENTARY SCHOOLS 1977-78

Prepared By

John A. Willis

BUREAU OF PLANNING, RESEARCH AND EVALUATION

J. Douglas Machesney

Assistant State Superintendent

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Daniel B. Taylor

State Superintendent of Schools

WEST VIRGINIA DEPARTMENT OF EDUCATION

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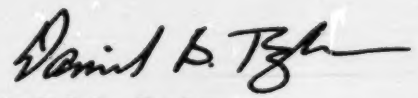
FOREWORD

Public schools are educating a wider variety of students than they have in the past. They have a mandate to educate children with vastly differing academic, mental and physical abilities, needs and social backgrounds. Such diversity makes schooling a complicated and difficult undertaking. To fulfill their mission adequately, schools must provide teachers with an array of teaching tools. One such tool is instructional television, the subject of this report.

As state superintendent of schools, as well as a member of the West Virginia Educational Broadcasting Authority, I am interested in expanding the instructional aspects of television.

This report provides basic information on the extent and quality of instructional television capacity in West Virginia's elementary schools. I urge school officials and media personnel to study carefully the findings of this report. If the contributions of television to the instructional needs of the schools are to be fully realized, every effort must be expended to overcome the technical, economic and pedagogic obstacles to instructional television use which are identified in this report.



Daniel B. Taylor
State Superintendent of Schools

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This study was part of internship duties performed by two doctoral students in the quantitative methods program of the educational psychology department at West Virginia University. Robert Brick designed the census and wrote the questionnaire in the fall of 1977 and Jack Willis analyzed the results and wrote the report in the spring.

The county instructional television coordinators played a crucial role. They were responsible for the dissemination and collection of the questionnaires. Their names appear on the inside back cover of this report.

The three directors of the school services department of the television stations provided invaluable assistance and cooperation. They are Rita Ray of WSWP-TV (Channel 9) in Beckley, William Russell of WMUL-TV (Channel 33) in Huntington, and Judi Parker of WWVU-TV (Channel 24) in Morgantown.

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I. INTRODUCTION

This report describes the use of instructional television in West Virginia public elementary schools. Three questions are addressed: What is the magnitude of instructional television implementation and utilization in West Virginia elementary schools? How is instructional television used by elementary teachers? What problems are there in using instructional television in elementary schools? The answers are derived from a census of elementary grade teachers in counties assessed for instructional television programming.

The report has five sections. This first section describes the census population and the census questionnaire. The second section concerns implementation and hardware issues of instructional television (or, "ITV"). The third section reports utilization levels in grades and classroom settings, classtime used on ITV, and ITV programs watched. The fourth section reports teachers' reasons for not using instructional television and teachers' suggestions for improving ITV use. The fifth section considers conclusions and recommendations regarding ITV use in West Virginia.

Census Population

The description of ITV use is based on questionnaires completed by teachers in county school systems which cooperate with a public television (ETV) station in West Virginia in the scheduling and broadcasting of ITV programs.

An ITV user is defined as a teacher in a county served by the ITV school services of a state ETV station. The user incorporates in his or her classroom teaching the ITV programming broadcasted by the ETV stations. This definition of an ITV user, naturally, excludes those teachers using out-of-state ITV programming, or obtaining the video tapes of ITV programs through some other means of delivery. This also excludes those teachers using ITV programming from one of the three state ETV stations in counties which did not arrange for the broadcasts. We assume the amount of such users is negligible.

This definition, automatically, excludes teachers in 23 counties from consideration. These counties did not participate in ITV programming from either Station WWVU-TV (Channel 24) in Morgantown, or Station WMUL-TV (Channel 33) in Huntington, or Station WSWP-TV (Channel 9) in Beckley.

However, we found that not all of the schools in the 32 participating counties had implemented instructional television. That is, some schools lacked either television sets or the technical ability to receive ITV broadcasts whether over cable or through air.

This situation results in two populations of non-users. One is the group of teachers in schools without ITV capability. They cannot use instructional television. The other is the group of teachers in schools with ITV capability, or implementation. They decline to use instructional television.

The population of users and nonusers is shown in Table 2.1. A map showing counties served by the ETV stations is on Page 3.

ITV implementation, or capability, in the state as it relates to ITV utilization is given in Table 2.1. First row figures are the number of elementary classroom teachers and the number of elementary schools (K-8),

PENNSYLVANIA
PARTICIPATING COUNTIES
NON-PARTICIPATING COUNTIES

including early childhood education (ECE) and special education centers, in the state. The figures are reduced in the second row because one county, Calhoun, is not considered within reception range of ITV stations. The figures are further reduced in the third row because 22 of the remaining 58 county school systems did not arrange for ITV broadcasts. The fourth row figures are the numbers of teachers and schools which participated in the census study. The figures in the fifth row are reduced because teachers at 23 schools reported lack of television sets. The figures in the sixth row are further reduced because teachers at 28 other schools reported lack of television reception. The seventh row figures are the number of teachers who reported utilization of ITV programs.

Furthermore, these populations are of classroom teachers in elementary schools, or special education and early childhood education (ECE) centers, who utilize, or do not utilize, ITV programs for the elementary level. ITV utilization is concentrated at the elementary level because most ITV programs for elementary classrooms constitute up to 80 percent of ITV programs broadcasted.

Response Rate

There are 871 elementary schools (K-8 and special education) and 10,129 elementary classroom teachers in the state. In the 32 counties participating in ITV broadcasting services, there are 567 elementary schools, or 65 percent of the elementary schools in the state; and 6,780 elementary classroom teachers, or 67 percent of the elementary classroom teachers in the state.

Four thousand, two hundred ninety-six (4,296) questionnaires were returned from 493 schools. This is a response rate of 63.4 percent for

teachers and 98.8 percent for the schools. These figures are tabulated in Table 2.1. All counties but six had teacher response rates of 90 percent or better. These six were Berkeley (87.2), Berkeley (88.3), Fayette (89.6), Grant (80.7), Hampshire (88.8), and Monroe (87.6).

Census Questionnaire

A three-page questionnaire was designed to augment surveys previously conducted by the three ITV station school services. The third page of the questionnaire contained a list of the year's ITV programs broadcasted for elementary grades. Teachers using instructional television (ITV) were asked to rate the quality of the series, to indicate whether they should be repeated and to indicate their regular or occasional use of the series. Since the ITV programs offered by the ITV stations are different, the third page varied depending on the station serving the school. The school services used this information in planning ITV programs for next year.

The first two pages were the same for all teachers in all ITV broadcast service areas.

Eight items on the first page asked teachers to say what grade(s) they taught, what "setting" in which they taught (e.g., traditional, departmental, etc.); the number of students they taught in an average day and the number of classes; what academic level of students was best suited to ITV; whether they have broadcast schedules, television sets, video tape equipment in their school; and whether and when they have used ITV. The second page had eight items. Two open-ended items allowed teachers to say how they thought ITV could be improved and why they had not used ITV this year. Six items were for teachers using ITV and concerned availability of teachers' guide and of television sets, the quality of television set repair and

reception; the hours spent weekly watching ITV programs; and the average length of discussions related to ITV lessons.

Each completed questionnaire was coded to indicate the ETV station service area, county, and school of the respondent. Seven thousand, five hundred fifteen (7,515) questionnaires were sent to teachers at 625 elementary schools. They were mailed to county ITV coordinators on Friday, December 16, 1977. By February 17, 1978, 4,617 completed questionnaires had been returned.

The questionnaires were sent to teachers in 38 county school systems which had used ITV programs previously. But, six counties did not formally purchase ITV school services this year. This report will deal only with those teachers in the 32 participating counties. Also excluded from this report are personnel other than classroom teachers, such as librarians, physical education teachers and traveling music teachers.

II. ITV IMPLEMENTATION

In this report, "implementation" refers to the use of instructional television, an audiovisual device provided by schools and school systems. ITV implementation must precede ITV utilization. Schools have implemented instructional television if they have television sets and "rent" air time for the broadcast of ITV programs, which they receive on their sets. Actual payments to television stations for transmitting video tapes of ITV programs are made by county school systems.

The ETV stations provide ITV programming as part of a service which includes printed broadcast schedules and descriptions of ITV programs, teachers' guides to each ITV program, technical assistance, and workshops on use of equipment and on television as audiovisual instruction.

This section reports the magnitude of ITV implementation in elementary schools and the maintenance of this implementation as perceived by teachers who use instructional television.

Extent of ITV Implementation

As Table 2.1 indicates, not all schools have implemented instructional television. Some are in counties not assessed for ITV program broadcasts. Some do not receive ITV broadcasts (whether by cable or through air).

Of the 55 counties in the state, 54 are considered within range of ETV stations. Thirty-two county school systems "bought" ITV programming from an ETV station at the time of our census. Twenty-one counties

participate in ITV programming broadcasted by WWVU-TV; four counties in ITV programming broadcasted by WMUL-TV; and seven counties in ITV programming broadcasted by WSWP-TV. (See Page 3.)

TABLE 2.1

ITV Implementation, 1977-78

ROW		ELEMENTARY TEACHERS	ELEMENTARY SCHOOLS	COUNTIES
1	Total in State	10,129[1]	871[1]	55
2	Within ETV Range	10,076[1]	866[1]	54[2]
3	In ITV Counties	6,780[1]	567[1]	32[2]
4	In Census	4,296	493	32
5	With TV Sets	4,151	470	32
6	With Sets & Reception	4,014	446	32
7	Using ITV Programs	3,223	446	32

1. Taken from superintendents' first month attendance reports.
2. Taken from information provided by ETV Stations, WWVU-TV, WMUL-TV and WSWP-TV.

In the census, teachers reported ITV implementation at 446 elementary schools (Row 6 in Table 2.1). This number represents 51.2 percent of all elementary schools in the state (Row 1), 51.5 percent of all elementary schools within range of ETV stations (Row 2), 78.6 percent of the schools in counties participating in ITV broadcasting (Row 3), 90.5 percent of the schools in the census (Row 4), and 94.9 percent of the schools with television sets (Row 5).

Availability and Maintenance of Television Sets

School building administrators have responsibility for ensuring convenient and certain accessibility of television sets and for alert maintenance and quick and effective repairs. Where schools do not have an electrician, or someone capable of repairing television sets, repair work requires outside assistance. This assistance may require cooperation of the county superintendent's office.

ITV users (i.e., Row 7 in Table 2.1) were asked to respond to a multiple-choice item on availability of television sets:

"How often is a TV set available when you need it?"

They were asked to choose one of four options: "Always," "Most of the Time," "Some of the Time," and "Seldom." The latter two options are perceptions of less than satisfactory availability.

TABLE 2.2

TV Set Availability
(Number of Schools)

Always	221 (49.6%)
Most of the Time	140 (31.4%)
Seldom or Some of the Time	50 (11.2%)
Indeterminate	35 (7.8%)

At 221 schools, all teachers were unanimous in saying television sets were always available. At 140 schools, all teachers said either always or most of the time. At 50 schools, some teachers said seldom or some of the time. These figures and percentages are given in Table 2.2.

Ten counties did not have any less than satisfied teachers:

Barbour, Berkeley, Grant, Hampshire, Hardy, Mercer
Putnam, Randolph, Summers and Wayne

Nine counties had schools at which more than one ITV user was less than satisfied:

Harrison, Kanawha, Marion, Marshall, Mineral, Monongalia,
Morgan, Tucker and Tyler

ITV users were asked to respond to a multiple-choice item on television set maintenance:

"How much of the time would you say the television sets in your school are kept in good repair?"

They were asked to choose one of four options: "Always," "Most of the Time," "Some of the Time," and "Seldom." As with the above analysis, it was assumed these two latter options were perceptions of less than satisfactory maintenance and repair.

TABLE 2.3

TV Set Maintenance
(Number of Schools)

Always	50 (11.2%)
Most of the Time	269 (60.3%)
Seldom or Some of the Time	118 (26.4%)
Indeterminate	9 (2.0%)

At 50 schools, all teachers were unanimous in saying television sets were always kept in good repair. At 269 schools, all teachers said either always or most of the time. And at 118 schools, some teachers said seldom or some of the time. These figures and percentages are given in Table 2.3.

Five counties did not have any less-than-satisfied teachers:

Berkeley, Grant, Hampshire, Hardy, and Pleasants

Twenty-four counties had schools at which more than one ITV user was less than satisfied:

Barbour, Brooke, Cabell, Fayette, Harrison, Kanawha, Lewis, Marion, Marshall, Mercer, Mineral, Monongalia, Monroe, Morgan, McDowell, Nicholas, Preston, Putnam, Randolph, Taylor, Tucker, Tyler, Upshur and Wetzel

The maintenance of television sets is a problem in many of the schools. Only 50 schools out of 446 (or 11.2 percent) are able to keep their sets in constant repair, according to their ITV users. ITV coordinators in 24 counties should investigate the seriousness of this problem and, if serious, should help in trying to solve the problem of less than satisfactory maintenance.

The availability of television sets is less of a problem. Two hundred twenty-one (221) schools (or 49.6 percent) have enough sets available to satisfy their ITV users. Apparently, some television sets are always available even when they are in poor repair. ITV coordinators in nine counties may want to investigate this matter.

ITV coordinators are county school personnel designated to work with ITV users and the school services departments of ETV stations.

Quality of Television Reception

Responsibility for ensuring the quality of television reception is difficult to assign, Yet it is a necessary ingredient for the use of instructional television.

The census revealed some problems in this area by the ITV users. They were asked to respond to a multiple-choice item:

"How is the television reception in your classroom (or wherever you use ITV)?"

They were asked to choose one of three options: "Good," "Fair," "Poor." The poor-response represents a serious problem. Schools at which some teachers said the reception was poor, while their colleagues said otherwise, indicates a "possible problem." Admittedly, some teachers may be responding "poor" to television pictures that need only be "fine tuned." It is assumed, however, that in this day and age such naivete' is rare among adult, experienced teachers.

TABLE 2.4

Quality of TV Reception
(Number of Schools)

Good	125 (28.0%)
Fair to Good	244 (54.7%)
Poor	56 (12.6%)
Indeterminate	21 (4.7%)

At 125 schools, all teachers were unanimous in saying reception was good. At 244 schools, all teachers said either good or fair. And at 56 schools, some teachers said poor. These figures and percentages are given in Table 2.4.

These 56 schools represent possible problems. Twenty-five are in WWVU school services, 23 in WMUL school services, and 8 in WSWP school services.

Ten counties did not have any teachers who reported poor reception:

Barbour, Berkeley, Grant, Hampshire, Hardy, Monroe, Pleasants, Randolph, Tyler, and Upshur

Fourteen counties had schools with "possible problems":

> Brooke, Cabell, Fayette, Kanawha, Marion, Mercer, Mineral, Monongalia, Morgan, McDowell, Preston, Putnam, Taylor, and Wetzel

The problems of television reception should be examined and its seriousness determined before decisions are made about expanding ITV programming.

Availability of Schedules and Guides

Broadcast schedules, usually in a catalog-like publication, and teachers' guides are books and booklets produced and/or distributed by the school services of the three educational television stations. The broadcast schedule-catalog may be mailed to schools for distribution to ITV users or mailed to county ITV coordinators for distribution to schools and the ITV user. The teachers' guides are usually sent to ITV coordinators for distribution to ITV users as needed.

The survey asked the ITV user how well these systems worked. They were asked to respond to two yes or no items:

> "Is the current broadcast schedule available to you?"
>
> "Are the current teachers' guides (or related materials) made available to you?"

The no-response represents a failure of the delivery system. Schools at which all teachers give a no-response indicate total failure of the delivery system. Schools at which some teachers said no and their colleagues said yes indicate partial success of the delivery system.

There are 3,223 teachers using instructional television at 446 schools in the 32 counties paying for ITV programming (Row 7 in Table 2.1). Three thousand, two hundred nine (3,209) teachers responded to the broadcast

schedule item. Of these, 3,169 said yes and 40 said no.

From this viewpoint, the delivery systems seem to work reasonably well --a "failure-rate" of slightly more than 12 ITV users missed for each thousand ITV users.

TABLE 2.5

Delivery of Broadcast Schedules
(Number of Schools)

Successfully	418 (93.9%)
Partially	25 (5.6%)
Failure	2 (0.4%)

Two schools had all of their ITV users to say no, the broadcast schedule is not available. These are "total failures" for the delivery system. One school was in WWVU school services, and the other in WSWP school services.

The other no-responding teachers were scattered among 25 other schools. These are "partial successes." Fourteen were in WWVU school services, two in WMUL school services, and nine in WSWP school services. These figures and percentages are given in Table 2.5.

"Total failures" occurred in two counties:

Fayette and Monongalia

"Partial successes" occurred in seven counties:

Fayette, Lewis, Marion Mercer, Pleasants, Putnam and Raleigh

Three thousand, sixty-five (3,065) teachers responded to the teachers' guides item. Of these, 2,951 said yes, and 114 said no.

At this level, the "failure rate" of the delivery system is slightly more than 37 ITV using teachers missed for every thousand ITV users.

TABLE 2.6

Delivery of Teachers' Guides
(Number of Schools)

Successfully	363 (81.8%)
Partially	79 (17.8%)
Failure	2 (0.4%)

Two schools had all of their ITV users to say no, teachers' guides are not available. Again, these are "total failures" for the delivery systems. One school was in WWVU school services, and the other in WSWP school services.

The other no-responding teachers were scattered among 79 other schools. These are "partial successes." Thirty-six were in WWVU school services, 18 in WMUL school services, and 25 in WSWP school services. These figures and percentages are given in Table 2.6.

"Total failures" occurred in two counties:

Monongalia and Raleigh

"Partial successes" occurred in 15 counties:

Barbour, Berkeley, Brooke, Fayette, Lewis, Mercer, Monongalia, McDowell, Nicholas, Pleasants, Preston Putnam, Raleigh, Randolph and Wetzel

Obviously, teachers' guides are harder for the systems to deliver than the schedules. Also, they may be crucial to getting the most benefit from ITV programs. The school services personnel and ITV coordinators from at least 16 counties need to improve the delivery systems which support the

utilization of instructional television.

Video Tape Equipment

Video tape equipment has been mentioned as a means of making ITV programming more accessible. Teachers in the census were asked about the availability of such equipment.

Teachers were asked to respond to a "yes or no" item:

> "In your school, is there equipment available which can be used to record and/or play back a TV program for presentation at a convenient time?"

Of the 4,296 teachers surveyed, 4,070 responded to this item. Six hundred ninety-five (695), 17.1 percent, said "yes," and 3,375, or 82.9 percent said "no."

Sixteen schools had all teachers reporting video tape equipment available; 338 schools had all teachers reporting no video tape equipment available.

These figures and percentages are given in Table 2.7.

TABLE 2.7

Video Tape Equipment
(Census Population)

	TEACHERS	SCHOOLS
Yes	695 (17.1%)	16 (3.2%)
No	3,375 (82.9%)	338 (68.6%)
Indeterminate	-- --	139 (28.2%)

III. ITV UTILIZATION

In this report, "utilization" refers to teachers' use of ITV programs to supplement, augment, or complement their classroom teaching. This section reports the level of such utilization by grades and by classroom setting, classtime spent on ITV programs, and the types of programs most used.

Extent of ITV Utilization

In the census, 3,223 teachers report ITV utilization (Row 7, Table 2.1). This figure represents 31.8 percent of all elementary classroom teachers in the state (Row 1), 32.0 percent of all elementary classroom teachers within range of an ETV station (Row 2), 47.5 percent of all elementary classroom teachers in counties participating in ITV broadcasting (Row 3), 75.0 percent of all elementary classroom teachers in the census (Row 4) and 80.3 percent of all elementary classroom teachers in schools with ITV implemented (Row 6).

The census results reiterates findings of previous ETV station surveys. Generally, the lower the elementary grade taught, the more likely teachers are to utilize instructional television. Table 3.1 gives the percentages of teachers using ITV programs in schools which have implemented instructional television (Row 6 of Table 2.1). First, second, and third grade teachers and special education teachers are most likely to use ITV programs. Seventh and eighth grade teachers are least likely to use ITV programs.

TABLE 3.1

ITV Utilization Rate by Grade Taught
(Persons Using ITV at Schools
with Some ITV Reception)

	PERCENT OF ITV USERS
Second Grade Teachers	89.6
First Grade Teachers	87.2
Third Grade Teachers	82.1
Special Ed. Teachers	81.0
Fourth Grade Teachers	79.6
Fifth Grade Teachers	76.1
EMR Teachers	72.1
Sixth Grade Teachers	70.5
Seventh Grade Teachers	62.5
Eighth Grade Teachers	61.7

A reason given for more ITV utilization among the lower grades is that self-contained classroom teachers (and those in non-traditional settings as well) have more flexibility to conform to ITV broadcast schedules than teachers with departmentalized schedules. Self-contained classrooms are common in the lower grades and departmentalization is more prevalent in the higher grades. (The census confirmed this latter contention.)

Teachers were asked to indicate whether they taught in self-contained classrooms, or in non-traditional settings, or in departmental settings, or in other settings unmentioned. Non-traditional settings include open classrooms and team teaching. Table 3.2 shows that in terms of percentage,

[illegible] are more ITV users in self-contained and non-traditional classrooms than in departmentalized classrooms. (Only 31 teachers were coded in the miscellaneous category, or 3.8 percent of the total responding.)

TABLE 3.2

ITV Utilization Rate by Class Setting
(Percent Using ITV at Schools
with Sets & Receivers)

	REGENT (FTL)(ITV)
Self-Contained	89.8
Non-Traditional	89.3
Depar-tmental	88.8
Other	79.2

Explaining these differential uses of ITV requires further study. A third descriptive characteristic was what type student teachers thought were amenable to ITV use. Of the teachers responding to this item, 79.2 percent said ITV is best suited for students of all types of abilities: average, above average and below average; 10.8 percent said students of average abilities; 5.2 percent said students of below average abilities; 4.3 percent said students of above average abilities; and 1.1 percent said ITV was not useful for any type.

Percentages very similar to those above are given whether the teachers are using ITV or whether they have used ITV previously or whether they have never used ITV.

There seems to be little to gain in continuing to conceptualize ITV

users and non-users in terms of how they regard the issue of ability and television.

Use of ITV Programming

The essence of instructional television lies in programs and the use made of them by teachers.

ITV programs are series of "lessons." The number of lessons in a series and the length of the lessons vary. For instance, "Sesame Street," the well-known series for early childhood education, or readiness learning, has 145 hour-long lessons; whereas "Environmental Field Trips," an environmental studies series for grades three through eight, has 15 five-minute lessons, and "Feelings," a guidance series in aiding one's self-concept for grades kindergarten through three, has six ten-minute lessons.

Another variable of ITV programs is whether or not they are designed for selective or sequential use. "Selective" series lessons are complete, self-contained units and may be used independently of one another. "Sequential" series lessons build one upon another and should be used in a prescribed order. "Electric Company," a basic reading skills series for grades two through four or five, has 130 thirty-minute lessons designed for selective use. "Wordworkers, Inc.," a phonics series for grade one, has 25 fifteen-minute lessons designed for sequential use.

ITV programs also vary as to grade levels and subject matter. In addition to the subjects already mentioned, there are series in elementary social studies, science, health, art, career education, language arts, mathematics, music, safety and history.

ITV programs are produced by various organizations. Some are educational television stations, production companies specializing in educational

programs, textbook publishers, film companies, city and county school systems, and state educational broadcasting authorities. Here in West Virginia, Station WMUL-TV has produced four program series: "Unto the Hills," a West Virginia studies series for grade 8 with 30 thirty-minute lessons; "See You," a health series for grades 4 through 6 with 10 fifteen-minute lessons; "Safe and Sound," a safety education series for grades kindergarten through three with 15 fifteen-minute lessons; and "Geography Jargon," a social studies series for grades four through nine with 30 fifteen-minute lessons. The first three series are used by all three school services this year, and the last is used by WMUL school services only.

Station WWVU-TV produced an edited digest version of its nightly news program, "The Mountain Scene Tonight," for ITV use. This is a current event series for grades four through seven with 32 twenty-minute "lessons" and is used by WWVU and WSWP school services.

The three school services each have systems for incorporating teachers' opinions in deciding which series to add to their schedules, which to continue and which to discontinue. As mentioned earlier, census results were used by the school services personnel in making such decisions. However, no data were collected on the effectiveness of such systems.

The survey does give information on classtime spent watching ITV programs, the most used programs, and teachers' ratings of ITV programs.

Classtime Spent on ITV

ITV users were asked to respond to a multiple-choice item on the number of hours a week they spend watching ITV programs:

> "Estimate the average amount of time your classes view ITV each complete (i.e., five-day) week. (If you teach more than one group of students, answer for the total culminative amount of time.)"

TABLE 3.3

Hours Per Week Spent Watching ITV Programs
(Percent of ITV Users)

Less than One Hour	34.5
One Hour	28.8
Two Hours	20.7
Three Hours	10.2
Four Hours	3.4
Five or More Hours	2.5

The use of ITV to supplement instruction is generally reflected in these responses. Approximately 63 percent of the teachers use ITV an hour or less a week. Even the 76 who use ITV five or more hours a week may not be excessive. Such time could be accounted for by teachers regularly using the daily one-hour "Sesame Street" lessons. Similarly, two and one-half hours a week could be spent by teachers regularly using the daily thirty-minute "Electric Company" lessons. These are the most extensively used series by teachers in all three school services areas.

ITV users were also asked to respond to a multiple-choice item on the amount of time spent in discussing ITV lessons, either before or after viewing:

> "What is the average amount of time you spend in discussion or other classroom activities related to an ITV lesson?"

Table 3.4 gives the percentages of ITV users to this item.

TABLE 3.4

Minutes Spent Discussing Each ITV Lesson
(Percent of ITV Users)

None	3.0
1 to 5 minutes	32.9
6 to 10 minutes	43.7
11 to 20 minutes	15.9
More than 20 minutes	4.5

Close to 80 percent of the teachers using instructional television spend ten minutes or less in discussions with their students about ITV lessons. This includes those discussions in preparation for watching the programs and those discussions after watching the programs

Further study would be needed to determine what this implies about the quality of ITV use. Initially, it would seem that the learning benefits of instructional television are increased by discussions. Without such discussions, instructional television may serve only a "baby sitting" purpose.

Most Used Programs

The last page of the census questionnaire contained a list of ITV program series. WWVU school services broadcasted 34 series for elementary classroom use; WMUL school services, 46 series; and WSWP school services, 43 series.

ITV users were asked to indicate the series they use regularly (75 percent of the lessons or more) and the series they use occasionally. For this report, these ratings were tabulated according to the grade level taught by the raters. The most frequently used programs for each grade level in each

of the three school service areas may serve to characterize the types of ITV programs used in elementary schools in the state.

Most ITV programming in the first grade was used to supplement instruction in reading, health and early childhood education. It was used also in art and guidance (by WWVU teachers) and in science (by WSWP teachers).

Most ITV programming in the second grade was used to supplement instruction in reading and language arts, health, and science. It was used also in art and guidance (by WWVU teachers), and in mathematics (by WSWP teachers).

Most ITV programming in the third grade was used to supplement instruction in reading and science. It was used also in art and guidance-mental health (by WWVU and WSWP teachers), in health (by WMUL and WSWP teachers), and in safety education and history (by WMUL teachers).

Most ITV programming in the fourth grade was used to supplement instruction in reading, guidance-mental health, literature and art. It was used also in social studies (by WWVU and WMUL teachers), in health (by WMUL teachers), in metric education (by WMUL and WSWP teachers), and in career education and music (by WSWP teachers).

Most ITV programming in the fifth grade was used to supplement instruction in literature, art and metric education. It was used also in social studies (by WWVU and WMUL teachers), in guidance-mental health (by WMUL and WSWP teachers), in science and music (by WSWP teachers).

Most ITV programming in the sixth grade was used to supplement instruction in literature and art. It was used also in social studies (by WWVU and WMUL teachers), metric education (by WWVU and WMUL teachers), science (by WMUL and WSWP teachers), reading and guidance-mental health (by WSWP teachers).

Most ITV programming in the seventh grade was used to supplement instruction in literature and metric education. It was used also in West Virginia current events and cognitive and perceptual training (by WWVU teachers), social studies (by WWVU and WMUL teachers), guidance-mental health, language arts and health (by WMUL teachers), and science (by WSWP teachers).

Most ITV programming in the eighth grade was used to supplement instruction in literature and West Virginia current events. It was used also in reading, social studies and cognitive and perceptual skills training (by WWVU teachers), and in guidance-mental health, metric education and history (by WSWP teachers).

Most ITV programming in early childhood education was used to supplement instruction in reading, early childhood education, and safety education. It was used also in guidance (by WWVU and WMUL teachers), in phonics (by WMUL teachers), and in science (by WSWP teachers).

Most ITV programming in special education was used to supplement instruction in reading, health education, early childhood education, science, and guidance. It was used also in safety education (by WWVU teachers), in phonics (by WMUL teachers), and in art (by WSWP teachers).

The ITV programs most used this year seem to reflect the curricular emphasis in elementary schools in West Virginia. Instruction concentrates on reading. ITV program series on basic reading skills were used in kindergarten through fourth grade and in special education and on literature (book reading) in grades four through eight. "Sesame Street," which focuses on elementary learning skills or "readiness" training, was used in kindergarten and first grade and special education. ITV programs on safety or health were used in kindergarten through second grade and special education; on

science, in second and third grades and special education; in art, in grades four through six; in guidance, in grade four and special education; and on metric education in grades five through seven.

Evaluations of ITV Programs

ITV users were to evaluate the program series they used. On the third page of the census questionnaire, they were asked to indicate whether a program was:

> "Excellent, one of the best offered" or "Good, effective, but not one of the best" or "Adequate, if a better, similar series cannot be found" or "Inadequate."

There were 17 elementary program series which are used by all three school services.

Five series are rated "Excellent" by 70 percent or more of the teachers, and two series are rated "Excellent" by less than 50 percent of the teachers.

The five top-rated programs are "Sesame Street," "Electric Company," "Cover to Cover," (literature), "Potpourri," (cognitive and perceptual skills), and "Inside/Out," (guidance-mental health). These are also among the most used ITV programs.

Two programs rated "Excellent" by less than a majority of users are "Environmental Field Trips" (for grades 3-8) and "Singing Down the Road" (for grades 4-6). These are top rated in "Good" and "Adequate" categories, however.

There were no programs rated as "Inadequate" by five percent or more of the teachers.

Teachers are generally satisfied with the quality of ITV programming provided this year. Programs in the curricular areas of reading and language arts ("Electric Company" and "Cover to Cover"), of "learning to learn"

("Sesame Street" and "Potpourri"), and of guidance ("Inside/Out") were especially excellent.

Number of Pupils Watching ITV

The questionnaire asked teachers to indicate the number of students in their classes. This did not provide a satisfactory source to estimate the number of students involved in ITV instruction.

An unduplicated count of students may be estimated from the number of ITV users and the elementary school pupil-teacher ratio of 25.1:1. This gives an estimated number of students who watch instructional television: 69,294.

IV. TEACHERS' COMMENTS

Teachers in the census were asked to comment on instructional television. Those not using were asked why they do not use instructional television. All were asked for suggestions on making instructional television [illegible] in their schools.

Reasons Given for Not Using ITV

Teachers not using instructional television this year gave their reasons in response to an open-ended item, "If you have not used ITV this year, please explain why." A classification system of 13 categories of reasons was developed. Responses were classified and coded.

There are 1,073 teachers who do not use instructional television in the census. Of these, 954 gave reasons for not using instructional television.

Table 4.1 divides these into teachers at the 446 schools which have implemented ITV services (693 teachers) and teachers at the 47 schools which have not implemented ITV services (261 teachers).

All 13 categories were used to classify reasons given by the nonusers at schools with sets and reception. Only four categories were used each by over 10 percent of the teachers. And six categories each had less than 5 percent use.

The category "no time" included those with a busy schedule, those who had no time except that devoted to required courses or learning outcomes,

TABLE 4.1

Why ITV Not Used This Year
-School Implementation-

RANK	693 NONUSERS AT SCHOOLS WITH ITV		261 NONUSERS AT SCHOOLS WITHOUT ITV	
1	Broadcast Times Inconvenient	(24.8%)	No Equipment or Facilities	(52.9%)
2	No Equipment or Facilities	(19.5%)	No or Poor Reception	(40.6%)
3	No Time	(16.7%)	Broadcast Times Inconvenient	(9.6%)
4	Facilities Inconvenient/Equipment not Available	(16.2%)	Facilities Inconvenient/Equipment not Available	(6.9%)
5	No or Poor Reception	(8.8%)	Equipment not Working	(4.2%)
6	Lack of Usable Programs	(6.6%)	No Time	(2.7%)
7	Equipment not Working	(6.5%)	Not Interested	(2.3%)
8	Not Interested	(4.8%)	Broadcast Schedule Incorrect--Not Aware of Programs	(1.1%)
9	Not Aware of Programs	(3.9%)		
10	Will Use Later in the Year	(1.6%)	Lack of Usable Programs	(0.8%)
11	Broadcast Schedule Incorrect	(1.4%)		
12	No Longer Needed	(0.6%)		
13	Absent from School	(0.4%)		

and those who had their pupils for a short amount of time. The category "do not want to or not interested in ITV use" referred to those who use notes and lectures, to those who said pupils get very little out of educational television. The category "ITV no longer needed" refers to those who said art and music teachers had been hired.

Only 10 categories were used to classify the reasons given by the 261 teachers at schools without ITV implementation. Two categories were most used (i.e., by more than 10 percent of the teachers), and five categories were least used (i.e., by less than 5 percent of the teachers).

The most used categories were "no equipment or facilities" and "no or poor reception." The concentration of percentages into these two categories indicates a certain unanimity among this group of nonusers: Television is just not available.

Such unanimity is absent in the group of nonusers in schools with ITV implemented. Nevertheless, the four most used categories do echo reasons for which conscientious principals and ITV coordinators should be concerned. Two categories deal with equipment and facilities. The category "facilities inconvenient or equipment not available" included those for whom television sets are difficult to carry up flights of stairs, those who would have to move their class, those for whom ITV use disturbs other classes, pupils in the area. The "no equipment or facilities" category deals, here, with video tape equipment, with facilities, and inadequate supply of television sets for ITV use. ITV coordinators should be aware that approximately a quarter cite they cannot arrange their schedule so as to use ITV programs as they are broadcasted by the stations.

Reasons given for not using instructional television this year were

also analysed by tabulating responses given by nonusers (at schools with ITV implemented), who have used ITV before and by teachers who have never used instructional television.

All 13 categories were used to classify reasons given by 692 former ITV users at schools with ITV implemented. Four categories were most used and five categories least used. These are given in Table 6.2. The demands and structures of curriculum schedules are the main reasons why these teachers have stopped using ITV this year. As noted previously, the three school services spend much effort in trying to arrange broadcast schedules amenable to use by teachers. But it is seemingly impossible to arrive at broadcast times convenient for all teachers. Conceivably video tape equipment could alleviate this problem. Broadcasted ITV programs could be recorded on video tape and used when needed by individual teachers. The feasibility of using video tape equipment should be studied before such a solution is implemented.

Eleven categories were used to classify reasons given by the 211 teachers who have never used instructional television at schools with ITV implemented. Four categories were most used and four least used.

The use of the two categories concerning equipment and facilities is seemingly anomalous. Why should these reasons be given when, obviously, television equipment and facilities are used by other teachers in the same schools? Perhaps these reasons reflect that there are not enough television sets for everyone or that teachers want television sets conveniently in their own rooms without having to share with others.

Teachers give different reasons for discontinuing ITV use. Those at nonparticipating schools have little to say about ITV services, per se.

TABLE 4.2

Why ITV Not Used This Year
-ITV Experience-
(At Schools With ITV)

RANK	482 TEACHERS WHO HAVE USED ITV		211 TEACHERS WHO HAVE NEVER USED ITV	
1	Broadcast Times Inconvenient	(28.0%)	No Equipment or Facilities	(32.7%)
2	No Time	(19.1%)	Broadcast Times Inconvenient	(17.5%)
			Facilities Inconvenient/Equipment not Available	(*)
3	Facilities Inconvenient/Equipment not Available	(15.6%)		
4	No Equipment or Facilities	(13.7%)	No Time	(11.4%)
5	No or Poor Reception	(9.3%)	No or Poor Reception	(7.6%)
6	Equipment not Working	(8.1%)	Not Aware of Programs	(7.1%)
7	Lack of Usable Programs	(6.8%)	Lack of Usable Programs	(6.2%)
8	Not Interested	(5.2%)	Not Interested	(3.8%)
9	Not Aware of Programs	(2.5%)	Equipment not Working	(2.8%)
10	Broadcast Schedule Incorrect	(1.6%)	Will Use Later in the Year	(1.9%)
11	Will Use Later in the Year	(1.4%)	Broadcast Schedule Incorrect	(0.0%)
12	No Longer Needed	(0.8%)		
13	Absent from School	(0.6%)		

but concentrate on the difficulty of using any kind of television, instructional or not. Lack of adequate television reception and equipment or facilities are the main reasons why those teachers have stopped using ITV this year. This can be rectified only at the expense of erecting television antennas, of installing TV cables, of buying television sets and video recording equipment, of furnishing facilities for ITV use--sound-proofed rooms, carts, external speakers, etc.

Suggestions for Improving ITV

Teachers were asked to respond to a second open-ended item, "Have you any suggestions for improving the quality of ITV in your school?" A classification system of ten different categories of suggestions was developed. As with the other open-ended item, two readers classified and coded responses.

Conceivably, the suggestions given for improving the quality of instructional television could vary depending on whether the teacher is using, or has used, or has never used instructional television.

There were 4,296 teachers who returned questionnaires, and 879 gave suggestions. Table 4.3 contains their suggestions.

Of the 879 teachers who gave suggestions, 641 currently used instructional television. All ten categories were used to classify their suggestions. Three categories were most used (i.e., by more than ten percent of the teachers), and three categories were least used (by less than five percent of the teachers).

"New or more equipment" suggestions included requests for new and more television sets, color television sets, video tape recorders, and external speakers or other ways of improving the sound quality.

TABLE 4.3

Suggestions for Improving ITV

RANK	641 TEACHERS USING ITV		162 TEACHERS WHO HAVE USED		76 TEACHERS WHO HAVE NEVER USED	
1	New or More Equipment	(28.1%)	New or More Equipment	(50.6%)	New or More Equipment	(63.2%)
2	Alter Programming	(26.4%)	New or Better or More Facilities	(14.2%)	New or Better or More Facilities	(23.7%)
			Better Reception	(")		
3	Alter Broadcast Times	(17.9%)			Better Reception	(6.6%)
					Alter Broadcast Times	(")
					Need Program Information	(")
4	Better Reception	(9.2%)	Alter Programming	(12.3%)		
5	Need Program Information	(8.6%)	Need Program Information	(9.9%)		
6	Everything's Okay	(6.4%)	Better Maintenance	(8.6%)	Alter Programming	(5.3%)
7	New or Better or More Facilities	(5.3%)	Alter Broadcast Times	(3.7%)	Training	(2.6%)
					Better Maintenance	(")
8	Better Maintenance	(3.6%)	Training	(3.1%)		
9	Instructional Aids	(1.9%)	Instructional Aids	(1.2%)	Everything's Okay	(1.3%)
10	Training	(0.3%)	Everything's Okay	(0.6%)		

"Alter programming" suggestions included two types of requests. One dealt with curricular interests: programs for middle schools, basic math on the intermediate level, more social studies programs, programs on modern music, and programs for slow learners and for deaf students. The other requests were of a critical nature: programs with more demonstrations and less lecturing, programs using simpler vocabulary, programs with less slang and more "correct" English, programs where new materials and ideas are introduced at a slower pace, more programs concentrating on "basic" skills and less on emotional and moral objectives, programs that allow for more viewer participation, programs that allow for more input from classroom teachers.

"Alter broadcast times" suggestions included requests for rescheduling "Sesame Street," science programs, and primary programs, scheduling programs for viewing in the "bus room" before and after school.

How practical are these suggestions? Implementing the first category of suggestions would require expenditures for expensive electronic hardware. The second category would require influencing ITV production procedures. This may be done with productions by local stations to the extent school services have mechanisms for teacher input (such as station WMUL). But beyond the local level, influence would have to be through an organized effort and/or campaign. The third category of broadcast times has been alluded to several times in this report. Additional means of transmitting programs would have to be found so that broadcast schedules could be tailored to suit individual teachers, schools, or counties. Closed-circuit television and video tape machines are possibilities, but they also are expensive.

Of the 879 who gave suggestions, 162 said they had used ITV previously, but were not using it this year. All ten categories were used to classify their suggestions. Four categories were most used, and four categories were least used.

As are current ITV users, former users are concerned with hardware issues ("new or more equipment") and software issues ("alter programming"). But, the hardware issues receive more emphasis. It is understandable the former users are little concerned about "broadcast times."

"New or better or more facilities" suggestions included requests for media rooms, putting sets on high stands.

"Better reception" suggestions were just that.

It is obvious that former users are not as concerned with ITV programming as they are with gaining access to ITV programs. This concern was discussed in the sections on reasons given for not using ITV and on television reception.

Of the 879 who gave suggestions, 76 teachers said they had never used ITV in their instruction. Nine categories were used to classify their suggestions. Two categories were most used, and three categories were least used.

These suggestions given by teachers who have never used instructional television parallel the reasons they gave for not having used instructional television (Table 4.2). They say they do not have access to television.

V. CONCLUSIONS AND RECOMMENDATIONS

This section describes the audiovisual use of instructional television and answers the three questions given at the beginning of this report. Implications of the census study are considered.

Descriptive Summary

The census provides figures for estimating, or describing, the use of instructional television (ITV) in West Virginia schools. "Instructional television use" is defined, in this report, as that use which depends on elementary school ITV programming distributed through broadcast facilities of the three public television (ETV) stations in the state. For air time devoted to ITV program broadcasting and for other services, the stations assess county school systems.

What is the magnitude of ITV implementation and ITV utilization?

Instructional television is provided by over half the county school systems in the state (32 of 55 counties) (see Table 2.1). Instructional television is implemented in at least half of the elementary schools in the state (446 of 871 schools) and in not more than 65.1 percent (567 of 871 schools) and utilized by at least a third of the elementary classroom teachers in the state (3,223 of 10,129 teachers) and by not more than 66.9 percent (6,780 of 10,129 teachers)

Teachers using instructional television (ITV users) report television sets readily available at approximately one out of two schools (49.6

percent) and scarce at approximately one out of every ten schools (11.2 percent). They report television set maintenance excellent in approximately one out of every ten schools (11.2 percent) and a problem in approximately one out of every four schools (26.4 percent). Television reception is good at seven out of every twenty-five schools (28.0 percent) and a problem at approximately three out of every twenty-five schools (12.6 percent). Delivery of broadcast schedules is complete at approximately 23 out of every 25 schools (93.9 percent). Delivery of teachers' guides is complete at approximately 20 out of every 25 schools (81.8 percent).

In the 446 schools with ITV implemented, the highest rates of use were reported by first, second, and third grade and special education teachers. Approximately eight out of every ten of these are ITV users. The second highest rates were reported by fourth, fifth and sixth grade, and early childhood and kindergarten teachers. Approximately seven out of every ten of these are ITV users. The lowest rates were reported by seventh and eighth grade teachers. Approximately three out of every ten of these use instructional television. Also, approximately eight out of every ten teachers in self-contained or non-traditional classrooms are ITV users and approximately five out of every ten teachers in departmentalized class schedules use instructional television.

How is instructional television used by teachers? Of the 3,223 ITV users, 63.3 percent have their classes watch an hour or less a week; 20.7 percent, two hours a week; 10.2 percent, three hours a week; 3.4 percent, four hours a week; and 2.5 percent, five or more hours a week.

Approximately 80 percent of these teachers spend 10 minutes or less

on class discussions about ITV lessons; 15.9 percent spend 11 to 20 minutes on class discussions; and 4.5 percent spend over 20 minutes on class discussions.

The most frequently used ITV program series concerns reading, learning readiness, safety and health, science, art, guidance in self-concepts, and metric education. The quality of programs used in reading and language arts, readiness and self-concept building were rated as especially excellent by the teachers who used them.

What problems are there in using instructional television? There are five problems:

1. Teachers must be provided with working television sets and with viewing facilities conducive to audiovisual instruction.
2. Systems for distributing ITV programs to schools and classrooms must be dependable.
3. ITV programs must advance essential curricular goals and objectives of teachers and schools.
4. ITV programs must be accessible, or available at times congruent to users' teaching schedule.
5. ITV programs must be used with verbal directions and verbal activities which support the audiovisual instruction.

Conclusions

Implementation of instructional television requires a school to acquire television set(s) and, perhaps, additional equipment and facilities, to install coaxial cables linking the set(s) to an antenna or cable system, and to rent air time for transmitting ITV programs or to rent cable and air time for transmitting ITV programs. At least one-half of the elementary schools in West Virginia have implemented instructional television.

Utilization of instructional television requires a teacher to have ready access to working television sets with adequate viewing facilities and reception and to have a teaching schedule congruent with broadcasts of ITV programs essential to required courses of instruction. At least a third of the elementary classroom teachers in West Virginia utilize instructional television.

Implications for Extending ITV Use

Five conditions are evident if ITV use is to be extended in West Virginia.

1. Increased use will require additional schools and school systems to provide teachers with working television sets and suitable viewing facilities.

2. Increased use may require schools and school systems to rent, or buy, video-taped ITV programs directly from a distributor. In this case, schools must have equipment to play video tapes and coaxial cables connecting video tape players to television sets.

3. Increased use may require schools and school systems to pay cable systems for transmitting the video tapes. In this case, the cable systems have video tape equipment to play the video tapes, which the systems have rented, bought, produced, or received via antenna. If such a method is employed schools must have their own coaxial link between the systems' cables and television sets.

4. Increased use will require ETV stations to broadcast more ITV programs essential to more courses of instruction and aired at times more convenient to a greater variety of teaching schedules.

5. Increased use will require training additional teachers in the use of equipment and in the use of ITV programs.